Grain Price OUTLOOK
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SOYBEANS: WILL WORLD PRODUCTION REBOUND?

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Summary

It appears that the 2003-04 marketing year is ending without the U.S. running out of soybeans! U.S. producers planted more acres to soybeans in 2004 than in 2003 and current crop conditions point to a rebound in the average yield as well. A record crop may be in the making, but there were high expectations last year that did not materialize. Brazil is expected to expand acreage in 2004-05 and a bounce in yields in South America would produce a huge crop in the spring of 2005.

Domestic feed demand should remain strong with high livestock prices and continued expansion in broiler production. World demand is expected to be supported by China, but at this stage it appears that the world will make the transition from short supplies to abundance during the next 10 months. If so, the high prices experienced during the 2003-04 marketing year will give way to much lower prices in 2004-05. Still, an average farm price in the low $6.00 range would be well above the $4.80 average for the five years from 1998-99 through 2002-03.

2003 Crop Larger Than Estimated

Beginning with the USDA's October 2003 forecast of the size of the 2003 U.S. crop, it became known that the rate of use of soybeans would have to slow significantly from the pace experienced the previous two years. Initially, it was expected that another large increase in South American production in 2004 would assist in that process. That crop, however, ran into trouble and turned out to be smaller than the 2003 harvest. Higher prices were then required to force the necessary reduction in use. Exports of U.S. soybeans were record large in the first quarter of the 2003-04 marketing year as China purchased and imported its needs early. Exports slowed in the second quarter, dropped sharply in the third quarter and grounded to a standstill in late June and early July. Fourth quarter exports may total only about 30 million bushels, compared to 102.5 million bushels exported last summer (Table 1). For the year, exports are expected to total only 900 million bushels (Table 2).

The domestic crush of soybeans during the first half of the year was near the level of a year ago, but moderated slightly in the third quarter. Crush during the fourth quarter is expected to total about 300 million bushels, or 100 million bushels per month, 21 percent less than the crush of a year ago. The required reduction during the last

quarter of the year is historically large, but not as large as expected a few weeks ago. At 410 million bushels, the USDA's June 1 estimate of soybean stocks was larger than expected, suggesting the 2003 crop was larger than estimated. The Census Bureau crush estimate is not yet available for June, but the estimate for members of the National Oilseed Processors Association indicated an 18.3 percent year-over-year decline in the June crush. On the surface it appears that the domestic crush during July and August will have to be 22.5 percent smaller than the crush of a year ago if the USDA's projection of the marketing year total of 1.5 billion bushels is correct.

The domestic soybean supplies during August could get augmented by earlier than normal harvest in some southern areas. Planted acreage in the southern states is estimated at 11.2 million acres, one million more than planted last year (Table 4). Most of that increase was in Arkansas, Louisiana, and Mississippi. As of July 18, the USDA's weekly report of crop progress indicated that maturity of crops in those states is running well ahead of both last year's and the 5-year average pace. In any case, year ending stocks of old crop soybeans will be extremely small, projected at 105 million bushels (Table 2). Meal and oil stocks will also be small, even with increased exports and reduced consumption (Tables 5 and 6).

New Crop Prospects

In its June *Acreage* report, the USDA indicated that U.S. producers planted a record 74.8 million acres of soybeans in 2004 (Table 3). That estimate is 1.4 million acres larger than planted acreage of a year ago, but 600,000 less than indicated in March. Planted area is up 500,000 acres in the western corn belt states and down 220,000 in the eastern corn belt states (Table 4). The largest increase occurred in the mid-south, where acreage is at the highest level since 2000. Some increase also occurred in southeastern states. Data obtained from USDA's area frame sample indicates that 6 percent of the planted acreage will be double-cropped acreage, about the same as experienced in recent history.

Over the past 10 years, the final estimate of planted acreage has been from 1.341 million acres above to 845,000 acres below the June estimate. The average difference was a decline of about 70,000 acres, however, acreage was lower in 7 of those 10 years. The average absolute difference was 585,000 acres. This year, some prevented planting due to wet conditions may result in the final acreage estimate falling below the June estimate. A planted acreage estimate of 74.55 million is used here.

The difference between planted and harvested acreage over the past 10 years ranged from 811,000 to 1.858 million acres, or 1.3 to 2.6 percent. Based on the June survey, the USDA has projected that difference at 1.154 million acres, or 1.5 percent, for 2004, about the same as for 2003. Given the reports of more than the usual amount of ponding and flooding this year, the difference may turn out to be larger than the current projection, depending on how many of the re-planted acres get harvested. If unharvested area is at 1.2 million, harvested acreage may be near 73.35 million. That is 300,000 acres below the initial projection by the USDA (Table 3).

It is never easy to anticipate soybean yields, but the experience of 2003 was a reminder of how quickly expectations can change. The 2003 crop was rated in generally good

condition through the end of the season, but the U.S. average yield was surprisingly low at 33.4 bushels per acre (Table 7). The average was the lowest since 1993, 8 bushels below the record yield of 1994, and 4.1 bushels below the 3-year average yield. As late as September last year, the USDA yield forecast based on farmer surveys and crop observations was at 36.4 bushels per acre, down from 39.4 bushels in August.

Historically there has been a good correlation between the percent of the crop rated good or excellent in the last crop condition report of the season and the U.S. average yield. The percent rated good or excellent explains 83.3 percent of the variation in the trend-adjusted average yield from 1986 through 2003. The estimated relationship is: yield = 28.87 + 0.1919 x (percent rated good or excellent). As of July 18, the USDA reported 68 percent of the crop in good or excellent condition. If that rating is maintained through the end of the season, an average yield of 41.9 bushels would be expected. Based on a regional trend analysis for the period 1978 through 2002, the USDA's World Agricultural Outlook Board (WAOB) projects the U.S. average yield at 39.9 bushels. The USDA's National Agricultural Statistics service will release the first projection of yield based on a farmer survey and field observations on August 12.

With the critical part of the growing season remaining, weather, insects, and disease can still have an impact on crop condition ratings and the final yield. Each 1 percent change in the portion of the crop rated good or excellent will change the yield expectation by about 0.19 bushels per acre. Typically, crop condition ratings decline from mid-July through the end of the season. A 10 percent point drop would result in a yield projection of 40 bushels per acre. That is the projection used here.

An average yield of 40 bushels on 73.35 million acres would result in a 2004 U.S. harvest of about 2.94 billion bushels. That is equal to the WAOB July projection based on more acres and a lower average yield.

Consumption to Rebound

A larger crop in 2004 will allow consumption of U.S. soybeans to expand during the 2004-05 marketing year. The domestic crush will likely expand due to a rebound in domestic meal and oil consumption stimulated by lower prices. Export demand for soybeans and products will be influenced by a number of factors, including the size of the soybean crop in South America in 2005.

In its July report of world production prospects, the USDA projected a 10.3 percent increase in Brazilian soybean area in 2004-05. For all of South America, area is expected to increase by 7.3 percent, to a total of 101 million acres. The average yield is projected at 41 bushels per acre, up from 36.3 bushels this year, but below the record yield of 42.1 bushels in 2003. Projections for selected countries are reported in Tables 8 and 9.

In addition to the 17 percent increase in soybean production expected for the rest of the world in 2004-05, the USDA projects a 6 percent increase in production of other major oilseeds (calculated from Table 10). The largest increase, 14.7 percent, is projected for cottonseed fueled by a 35 percent increase by the largest producer, China. Increases are also expected for peanuts (8.3 percent), rapeseed (3.8 percent), and palm oil (2.7 percent). A decline of 1.4 percent is projected for sunflower seed production.

On the demand side, the most important factor for soybeans is the size of the Chinese market. China imported large quantities of soybeans (787 million bushels) in 2002-03, but imports are projected at only 660 million bushels for the current year. About 46 percent of total imports this year are from the U.S., compared to only 36 percent during the 2002-03 marketing year. This year, China bought U.S. soybeans very early in the marketing year, but have been mostly absent from the market since late winter. The rejection of South American soybeans a few weeks ago suggested that China has abundant supplies. For the 2004–05 marketing year, China purchased about 74 million bushels late in 2003, but has made no additional purchases.

The potential for a large increase in world soybean and total oilseed production during the year ahead, along with the slowdown in Chinese purchases, suggests that U.S. soybean exports will rebound slowly in 2004-05. The USDA currently projects U.S. exports during the year ahead at 1.05 billion bushels, nearly 17 percent larger than exports during the current year. A projection of 1.025 billion bushels is used here.

The increased competition expected for U.S. soybeans during the year ahead may also limit the recovery in U.S. exports of soybean meal and oil. The USDA projects a modest increase for both, but the projections are well below the level of shipments in 2002-03. Based on these projections, a rebound in the domestic soybean crush to 1.645 billion bushels is projected. If seed, feed and residual use of soybeans rebounds to 130 million bushels, total use would reach 2.8 billion bushels, leaving year ending stocks of 250 million bushels. Stocks at that level would represent 8.9 percent of projected consumption. On a world wide basis, soybean stocks could increase more dramatically if the South American crop rebounds as projected.

Price Prospects

Soybean prices have traded in an extremely wide range over the past two years. The average cash bid in central Illinois was near $5.00 in early October 2002, reached $6.40 in May 2003, declined to $5.33 in late July 2003, peaked at $10.40 in March 2004 , and stood at $7.32 on July 19. Barring a large price increase over the next six weeks, 2003-04 will be the first year in at least 30 years that the central Illinois cash price reached a marketing year high in March. The shortfall in South American production probably explains that unusual pattern. For the year, the U.S. average farm price will be near $7.55, the highest since 1983-84. Prices averaged over $8.00 per bushel for five consecutive months from January through June 2004.

Soybean prices are notoriously difficult to forecast due to the large number of factors that can influence price and the difficulty in predicting those factors. As a starting point, the projected ratio of year ending stocks- to-use can be used as an indicator of the season's average price. A simple model has been developed to estimate that relationship. This is a short-cut method of capturing the underlying supply and demand factors that influence price. It should be remembered that very different supply and demand conditions in individual years can lead to similar ratios of stocks-to-use, but very different prices. The model, based on observations from 1989-90 through 1997-98 is as follows: price = $4.63 + 14.96 (1 ÷ ratio of stocks to use). For 2004-05 the projected marketing year average price, then, is: $4.63 + 14.96 (1 ÷ 8.9) = $6.31. The

projection used here is lower, at $6.00, based on the expectation that the stocks-to-use-model results in an over-estimate of average price when supplies are abundant and use is high.

Based on the USDA projection of a year ending stocks -to- use ratio of 7.4 percent, the model projects an average price of $6.65, but the midpoint of the USDA price forecast range is $6.20. The projection from the model has more validity prior to, or early in the marketing year, when prices have an opportunity to respond to market fundamentals. For the 2003-04 marketing year for example, the current expectation is that year ending stocks will represent 4.2 percent of total consumption. The model projects a 2003-04 marketing year average price of $8.19, well above the $7.55 average actually expected. For the current year, the extreme shortage in U.S. and world supplies was recognized late in the year so that much of the crop was sold by farmers very early in the marketing year at what turned out to be low prices. One-third or more of the crop was sold for less than $6.50 per bushel.

Marketing Decisions

At any time, the projection of the U.S. average farm price can be compared to the average price offered by the futures market. The average price offered by the market is computed as the futures price (September 2004 through August 2005) adjusted by expected U.S. basis (3-year average is used here) and the expected percent of the crop to be marketed in each month from September 2004 through August 2005 (5 year average is used here). At the close of trade on July 19, then, the futures market was offering a 2004-05 marketing year average price of $6.37. The market has apparently captured current new crop supply and consumption expectations. Now the question is, in which direction will these fundamental factors change? As changes to balance sheet components occur (yield, acres, projection of use) new price projections can be made.

That can be done efficiently at the web site

www.farmdoc.uiuc.edu/marketing/soybean_balance_tool/soybean_balance.asp

There is also a downloadable spread sheet at that site that can be used to enter current futures prices and calculate the current average farm price offered by the market.

Late season price rallies may offer opportunities to price additional quantities of new crop soybeans. Based on recent price activity, targets for November futures include $6.65, $6.85, and $7.00. Options may also offer a way to manage some of the risk of price volatility. For example, buying near-the-money put options and selling out-of-the-money call options establishes a price window. Buying $6.40 November put options for $.385 per bushel and selling $7.40 call options for $.16 (for a net cost of $.225) establishes a price floor of $6.175 and a ceiling of $7.175 on November futures. Remember that selling call options in this example will require maintaining margin on the underlying futures contract.

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Table 1. Soybean Quarterly Balance Sheet

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
	million bushels																					
September 1 stocks	254.5	344.6	175.7	316.1	536.4	436.4	302.5	182.0	239.1	329.0	278.4	292.3	209.1	334.8	183.5	131.8	199.8	348.5	290.2	247.7	208.0	178.3
Production	2,190.3	1,635.8	1,860.9	2,099.1	1,942.6	1,937.7	1,548.8	1,923.8	1,925.9	1,986.6	2,190.4	1,869.7	2,514.9	2,174.3	2,380.3	2,688.8	2,741.0	2,653.8	2,757.8	2,890.7	2,756.1	2,417.6
TOTAL	2,444.8	1,980.4	2,036.6	2,415.2	2,479.0	2,374.1	1,855.3	2,108.8	2,167.0	2,319.6	2,470.8	2,167.0	2,730.0	2,514.1	2,572.8	2,825.6	2,943.8	3,006.3	3,052.0	3,141.3	2,968.8	2,603.9
September-November																						
Crush	284.2	269.6	253.7	267.5	295.8	293.4	275.4	273.0	304.1	322.0	328.2	329.6	346.2	351.4	360.6	395.8	409.3	426.7	420.9	427.5	417.5	419.4
Export	245.9	190.6	153.4	166.5	216.5	260.8	138.3	168.5	120.1	167.1	235.9	176.0	230.9	233.6	289.7	365.3	268.5	297.8	315.5	348.6	320.4	390.1
Seed, residual	-36.2	48.5	14.8	21.5	10.1	64.6	74.8	56.6	58.8	51.5	70.7	79.8	50.9	95.7	97.4	66.9	78.5	98.9	75.6	89.6	112.3	99.9
TOTAL	493.9	508.7	421.9	455.4	522.4	618.8	488.5	498.1	483.0	540.6	634.8	585.4	628.0	681.7	747.7	826.2	758.8	823.4	812.0	865.7	850.2	909.4
December 1 stocks	1,950.9	1,471.7	1,614.7	1,959.8	1,956.6	1,755.3	1,366.8	1,610.7	1,684.0	1,779.0	1,836.0	1,573.6	2,102.0	1,833.4	1,825.1	1,999.4	2,186.4	2,182.7	2,240.0	2,275.6	2,115.4	1,688.7
Crush	314.9	262.5	276.4	281.9	320.1	317.3	286.3	304.3	301.4	323.1	335.2	327.2	371.8	359.0	400.7	443.1	408.6	408.1	417.9	447.6	422.0	423.2
Export	263.6	234.6	230.2	270.9	233.7	258.9	197.0	217.0	179.7	259.6	255.9	212.7	283.5	278.7	333.1	306.4	243.1	315.4	338.4	422.7	425.7	346.0
Seed, residual	26.6	18.8	47.0	35.7	63.8	33.0	-6.7	33.9	12.8	19.6	29.3	12.1	76.5	5.3	35.5	46.9	77.0	63.2	79.8	69.3	66.7	15.0
TOTAL	605.1	515.9	553.6	588.5	617.6	609.2	476.6	555.2	493.9	602.3	620.4	552.0	731.8	643.0	769.3	796.5	728.7	786.7	836.1	939.6	914.4	784.2
March 1 stocks	1,345.8	955.8	1,061.1	1,371.3	1,339.0	1,146.1	890.2	1,055.5	1,190.1	1,177.3	1,215.6	1,021.6	1,370.2	1,190.4	1,055.8	1,202.9	1,457.3	1,396.0	1,403.9	1,336.0	1,202.0	905.8
Crush	260.1	240.0	258.2	262.3	297.2	308.3	270.1	290.7	295.5	304.0	325.4	320.4	361.7	334.0	355.7	404.9	396.4	373.9	405.4	429.6	400.2	359.6
Export	216.2	204.2	153.4	226.4	159.3	185.0	135.5	153.2	146.9	148.2	186.7	120.6	216.6	188.5	165.9	120.0	161.9	205.8	220.8	155.0	196.4	132.4
Seed, residual	78.9	39.9	41.1	33.7	45.7	-2.5	20.1	15.7	24.2	29.4	20.1	25.3	0.0	44.9	34.3	84.4	50.4	58.9	69.5	66.5	4.3	5.4
TOTAL	555.2	484.1	452.7	522.4	502.2	490.8	425.7	459.6	466.6	481.6	532.2	466.3	578.3	567.4	555.9	609.2	608.7	621.8	695.7	651.1	600.9	497.4
June 1 stocks	790.6	471.7	608.4	848.9	836.8	655.3	464.5	595.9	723.5	695.7	683.4	555.3	791.9	622.8	499.9	593.7	848.6	774.4	708.2	684.9	602.4	409.6
Crush	248.8	210.6	242.1	241.1	265.5	255.5	225.8	278.4	285.9	304.6	290.0	298.4	325.5	324.9	318.7	353.2	375.4	370.1	395.8	395.0	375.6	
Export	179.5	113.6	61.1	76.3	147.4	97.6	56.2	84.2	110.4	109.0	91.0	79.7	107.0	150.5	93.0	78.7	127.5	171.6	121.3	137.2	102.5	
Seed, residual	17.7	-28.2	-10.9	-4.9	-12.5	0.3	0.5	-5.8	-1.8	3.1	10.1	-31.9	24.6	-35.2	-43.6	-37.9	-1.3	-55.0	-56.6	-55.3	-53.1	
TOTAL	446.0	296.0	292.3	312.5	400.4	352.8	282.5	356.8	394.5	416.7	391.1	346.2	457.1	439.6	368.1	393.9	501.6	486.7	460.5	476.9	425.0	
September 1 stocks	344.6	175.7	316.1	536.4	436.4	302.5	182.0	239.1	329.0	278.4	292.3	209.1	334.8	183.5	131.8	199.8	348.5	290.2	247.7	208.0	178.3	
Annual																						
Crush	1,108.0	982.7	1,030.4	1,052.8	1,178.7	1,174.5	1,057.6	1,146.4	1,186.9	1,253.7	1,278.8	1,275.6	1,405.2	1,369.4	1,435.7	1,595.1	1,589.7	1,578.8	1,650.0	1,699.7	1,615.3	
Export	905.2	743.0	598.1	740.1	756.9	801.7	527.0	622.9	557.1	683.9	769.5	589.0	838.0	851.2	881.7	870.4	801.0	973.8	996.0	1,063.5	1,045.0	
Seed, residual	87.0	79.0	92.0	85.9	107.0	95.4	88.7	100.4	94.0	103.6	130.2	85.3	152.0	110.4	123.6	160.3	204.6	166.2	168.3	170.1	130.2	
TOTAL	2,100.2	1,804.7	1,720.5	1,878.8	2,042.6	2,071.6	1,673.3	1,869.7	1,838.0	2,041.2	2,178.5	1,949.9	2,397.0	2,330.9	2,441.0	2,625.8	2,595.3	2,718.8	2,803.10	2933.3	2,790.5	

Table 2. Soybean Balance Sheet -- Years Beginning September 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05[a]
	million bushels															
Carryin	182	239	329	278	292	209	335	183	132	200	348	290	248	208	178	105
Production	1,924	1,926	1,987	2,190	1,870	2,515	2,174	2,380	2,689	2,741	2,654	2,758	2,891	2,756	2,418	2,940
TOTAL[b]	2,109	2,167	2,320	2,470	2,168	2,729	2,514	2,573	2,826	2,944	3,006	3,052	3,141	2,969	2,602	3,050
Crush	1,146	1,187	1,254	1,279	1,276	1,405	1,369	1,436	1,597	1,590	1,578	1,640	1,700	1,615	1,500	1,645
Export	623	557	684	770	589	838	851	882	870	805	975	996	1,064	1,045	900	1,025
Seed, feed, residual	101	94	103	129	94	151	111	123	159	201	163	169	169	131	97	130
TOTAL	1,870	1,838	2,041	2,178	1,954	2,394	2,331	2,441	2,626	2,596	2,716	2,804	2,933	2,791	2,497	2,800
Carryout	239	329	278	292	209	335	183	132	200	348	290	248	208	178	105	250
U.S. Average price	$5.70	$5.75	$5.58	$5.60	$6.40	$5.48	$6.77	$7.35	$6.47	$4.93	$4.63	$4.54	$4.38	$5.53	$7.55	$6.00

[a] Projected

Table 3. Soybean Planting Intentions, Actual Plantings, and Acres Harvested

Year	January Intentions	Mar./April Intentions	June/July Intentions	Actual	Harvested Acreage
			million acres		
1975	57.5	56.6	54.6	54.6	53.8
1976	50.9	49.3	49.0	50.3	49.4
1977	53.1	55.7	59.0	59.0	57.6
1978	63.9	63.7	64.0	64.7	63.3
1979	66.3	68.8	71.6	71.4	70.3
1980	71.6	71.3	70.3	69.9	67.8
1981	----	69.8	68.5	67.5	66.2
1982	69.5[a]	---	72.2	70.9	69.4
1983	68.8[a]	65.8[b]	63.3	63.8	62.5
1984	65.2[a]	---	68.0	67.8	66.1
1985	64.4[a]	---	63.3	63.1	61.6
1986	---	62.0	61.8	60.4	58.3
1987	---	56.9	58.7	58.180	57.172
1988	---	58.0	58.5	58.840	57.373
1989	---	61.7	61.3	60.820	59.282
1990		59.42	58.05	57.795	56.283
1991	58.5	57.12	59.78	59.180	58.169
1992		57.42	59.03	59.180	58.233
1993		59.30	61.58	60.085	57.307
1994		61.12	61.78	61.620	60.809
1995		61.45	63.105	62.495	61.544
1996		62.478	63.895	64.195	63.349
1997		68.800	70.850	70.005	69.110
1998		72.000	72.720	72.025	70.441
1999		73.105	74.205	73.730	72.446
2000		74.871	74.501	74.266	72.408
2001		76.657	75.416	74.075	72.975
2002		72.966	72.993	73.923	72.437
2003		73.182	73.653	73.404	72.321
2004		75.411	74.809		(73.655)

[a] February 1

[b] May 1

Table 4. Planted Acres of Soybeans by Region

	Western Corn Belt[a]		Eastern Corn Belt[b]		Mid-South[c]		Southeast[d]		East Coast[e]		United States	
Region	000 acres	%	000 acres	%	000 acres	%	000 acres	%	000 acres	%	000 acres	%
1976	16,145	32.1	14,530	28.9	13,630	27.1	4,799	9.6	1,122	2.3	50,226	100.0
1979	23,370	32.7	19,620	27.5	18,470	25.9	8,360	11.7	1,591	2.2	71,411	100.0
1986	24,875	41.2	18,300	30.3	10,995	18.2	4,680	7.8	1,535	2.5	60,385	100.0
1987	24,120	41.5	18,580	31.9	10,330	17.8	3,675	6.3	1,475	2.5	58,180	100.0
1988	24,310	41.3	18,680	31.7	10,460	17.8	3,810	6.5	1,580	2.7	58,840	100.0
1989	24,790	40.8	19,020	31.3	10,750	17.7	4,460	7.3	1,800	2.9	60,820	100.0
1990	23,750	41.1	18,490	32.0	10,270	17.2	3,650	6.3	1,635	2.8	57,795	100.0
1991	26,035	44.0	19,420	32.8	8,990	15.2	3,005	5.1	1,730	2.9	59,180	100.0
1992	25,400	42.9	20,000	33.8	8,980	15.2	2,915	5.2	1,715	2.9	59,180	100.0
1993	25,300	42.1	20,410	34.0	9,690	16.1	2,915	4.9	1,770	2.9	60,085	100.0
1994	27,220	44.1	20,510	33.3	9,220	15.0	2,875	4.7	1,795	2.9	61,620	100.0
1995	28,210	45.1	21,130	33.8	9,130	14.7	2,290	3.6	1,735	2.8	62,495	100.0
1996	28,250	44.0	22,370	34.8	9,390	14.6	2,565	4.0	1,620	2.5	64,195	100.0
1997	32,450	46.4	22,610	32.3	10,390	14.8	2,777	4.0	1,778	2.5	70,005	100.0
1998	33,700	46.8	23,650	32.8	10,180	14.1	2,690	3.8	1,805	2.5	72,025	100.0
1999	35,800	48.5	24,100	32.7	9,700	13.2	2,360	3.2	1,770	2.4	73,730	100.0
2000	37,050	49.9	24,050	32.4	9,010	12.1	2,230	3.0	1,926	2.6	74,266	100.0
2001	37,700	50.9	24,650	33.3	7,685	10.4	2,135	2.9	1,905	2.5	74,075	100.0
2002	37,070	50.1	24,740	33.5	8,140	11.0	2,145	2.9	1,870	2.5	73,923	100.0
2003	37,650	51.3	23,770	32.4	7,990	10.9	2,253	3.0	1,741	2.4	73,404	100.0
2004	38,150	51.0	23,550	31.5	8,810	11.8	2,395	3.2	1,904	2.5	74,809	100.0

[a] Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

[b] Illinois, Indiana, Michigan, Ohio, Wisconsin

[c] Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, Texas

[d] Alabama, Florida, Georgia, North Carolina, South Carolina

e Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia

Table 5. Soybean Meal Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
	thousand tons														
Beginning stocks	173	318	285	230	204	150	223	212	210	218	330	293	383	240	220
Production	27,719	28,325	29,831	30,364	30,514	33,270	32,527	34,210	38,176	37,792	37,591	39,385	40,292	38,213	35,530
TOTAL[a]	27,982	28,688	30,183	30,687	30,788	33,483	32,825	34,524	38,443	38,109	37,970	39,729	40,818	38,619	36,075
Domestic	22,291	22,934	23,007	24,251	25,283	26,542	26,611	27,320	28,895	30,657	30,345	31,643	33,070	32,386	31,650
Exports	5,319	5,469	6,946	6,232	5,356	6,717	6,002	6,994	9,330	7,122	7,332	7,703	7,508	6,013	4,250
TOTAL	27,610	28,403	29,953	30,483	30,639	33,260	32,613	34,314	38,225	37,779	37,677	39,346	40,578	38,399	35,900
Ending stocks	318	285	230	204	150	223	212	210	218	330	293	383	240	220	175
Price[b]	$186.48	$181.38	$189.21	$193.75	$192.86	$162.55	$235.92	$270.90	$185.28	$138.55	$167.70	$173.60	$167.73	$181.57	$270.00

[a] Includes imports

[b] Bulk, Decatur, Illinois 48%

Table 6. Soybean Oil Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
	million pounds														
Beginning stocks	1,715	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,767	2,358	1,491
Production	13,003	13,406	14,346	13,778	13,951	15,613	15,240	15,752	18,143	18,081	17,825	18,420	18,898	18,438	16,660
TOTAL[a]	14,740	14,728	16,132	16,027	15,574	16,733	16,472	17,821	19,723	19,546	19,427	20,488	21,711	20,843	18,436
Domestic	12,082	12,163	12,246	13,053	12,941	12,916	13,465	14,263	15,262	15,655	16,056	16,320	16,833	17,091	16,550
Exports	1,353	779	1,647	1,419	1,529	2,680	992	2,037	3,079	2,372	1,376	1,401	2,519	2,261	850
TOTAL	13,435	12,942	13,893	14,472	14,471	15,596	14,457	16,300	18,341	18,027	17,432	17,721	19,353	19,352	17,400
Ending stocks	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,767	2,358	1,491	1,036
Average Price[b]	22.3¢	21.0¢	19.1¢	21.4¢	27.1¢	27.6¢	24.75¢	22.5¢	25.8¢	19.9¢	15.6¢	14.2¢	16.5¢	22.0¢	31.3¢

[a] Includes imports

[b] Bulk, Decatur, Illinois 44%

Table 6. Soybean Oil Balance Sheet -- Years Beginning October 1

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
	million pounds														
Beginning stocks	1,715	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,767	2,358	1,491
Production	13,003	13,406	14,346	13,778	13,951	15,613	15,240	15,752	18,143	18,081	17,825	18,420	18,898	18,438	16,660
TOTAL[a]	14,740	14,728	16,132	16,027	15,574	16,733	16,472	17,821	19,723	19,546	19,427	20,488	21,711	20,843	18,436
Domestic	12,082	12,163	12,246	13,053	12,941	12,916	13,465	14,263	15,262	15,655	16,056	16,320	16,833	17,091	16,550
Exports	1,353	779	1,647	1,419	1,529	2,680	992	2,037	3,079	2,372	1,376	1,401	2,519	2,261	850
TOTAL	13,435	12,942	13,893	14,472	14,471	15,596	14,457	16,300	18,341	18,027	17,432	17,721	19,353	19,352	17,400
Ending stocks	1,305	1,786	2,239	1,555	1,103	1,137	2,015	1,520	1,382	1,520	1,995	2,767	2,358	1,491	1,036
Average Price[b]	22.3¢	21.0¢	19.1¢	21.4¢	27.1¢	27.6¢	24.75¢	22.5¢	25.8¢	19.9¢	15.6¢	14.2¢	16.5¢	22.0¢	31.3¢

[a] Includes imports

[b] Bulk, Decatur, Illinois 44%

Table 7. United States Soybean Yield Estimates

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
										million bushels															
August 1	30.3	27.4	30.2	32.3	29.7	30.5	31.5	32.9	34.7	26.0	32.3	32.5	31.8	35.8	33.8	37.6	36.4	36.3	39.5	39.5	39.2	40.7	38.7	36.5	39.4
September 1	30.9	27.0	31.2	32.6	24.9	30.3	33.2	33.1	34.0	25.9	32.0	32.4	31.0	35.9	34.0	38.2	37.0	35.8	39.3	40.6	37.9	39.5	38.2	37.0	36.4
October 1	31.5	26.0	31.5	32.4	24.7	29.5	33.9	33.3	34.2	26.4	32.6	32.3	33.0	36.3	33.7	40.5	35.5	37.0	39.0	38.7	37.0	38.7	39.2	37.0	34.0
November 1	31.8	26.5	31.0	32.4	25.0	28.5	34.2	33.8	34.1	26.6	32.8	33.7	33.5	37.3	32.7	41.5	35.4	37.9	39.2	38.6	36.7	38.0	39.4	37.5	33.8
January 1	32.2	26.8	30.4	32.2	25.7	28.2	34.1	33.8	33.7	26.8	32.4	34.0	34.3	37.6	32.0	41.9	34.9	37.6	39.0	38.9	36.5	38.1	39.6	37.8	33.4
FINAL	32.1	26.5	30.1	31.5	26.2	28.1	34.1	33.3	33.9	27.0	32.3	34.1	34.2	37.6	32.6	41.4	35.3	37.6	38.9	38.9	36.6	38.1	39.6	38.0	

Table 8. Soybean Production by Country

Year	United States	Brazil[a]	Argentina[a]	Paraguay[a]	China	Other	World	All Foreign
				million bushels				
1970	1,127	76	2	3	254	165	1,627	500
1971	1,176	135	3	4	290	126	1,734	558
1972	1,283	184	10	4	320	66	1,867	584
1973	1,547	289	18	7	367	64	2,292	745
1974	1,215	363	18	8	349	54	2,007	792
1975	1,547	413	26	10	367	46	2,409	862
1976	1,288	460	51	14	242	128	2,183	895
1977	1,762	350	99	12	266	154	2,643	881
1978	1,870	557	136	20	278	167	2,847	977
1979	2,261	376	132	21	274	191	3,255	994
1980	1,798	558	129	22	292	176	2,975	1,177
1981	1,989	471	152	22	342	186	3,162	1,173
1982	2,190	542	154	19	332	200	3,437	1,247
1983	1,636	571	257	20	359	213	3,056	1,420
1984	1,861	672	248	35	356	248	3,421	1,561
1985	2,099	518	268	22	386	272	3,565	1,466
1986	1,943	636	257	35	427	303	3,601	1,658
1987	1,938	662	356	40	457	359	3,812	1,874
1988	1,549	852	235	60	428	387	3,506	1,957
1989	1,924	747	395	58	376	445	3,945	2,020
1990	1,926	579	423	48	404	446	3,826	1,900
1991	1,987	709	410	48	357	435	3,946	1,959
1992	2,188	827	417	64	378	434	4,308	2,120
1993	1,871	908	456	66	563	454	4,318	2,447
1994	2,517	952	459	81	588	460	5,057	2,540
1995	2,177	887	457	88	496	487	4,591	2,415
1996	2,380	1,003	412	102	486	474	4,857	2,477
1997	2,689	1,194	717	110	551	545	5,806	3,117
1998	2,741	1,150	735	112	557	577	5,872	3,131
1999	2,654	1,257	779	107	525	527	5,875	3,221
2000	2,758	1,433	1,021	129	566	525	6,432	3,674
2001	2,891	1,598	1,102	130	566	506	6,793	3,902
2002	2,756	1,929	1,304	165	607	489	7,250	4,494
2003	2,418	1,933	1,249	147	588	614	6,941	4,531
2004	2,940	2,425	1,433	187	643	627	8,252	5,312

[a] Harvested in the spring of the following year.

Table 9. South American Soybean Area, Yield and, Production, 1988 to Date

	Brazil			Argentina			Paraguay		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
Year	mil. ha.	t/ha.	mil.t	mil. ha.	t/ha.	mil. t.	mil. ha.	t/ha.	mil. t.
1988-89	12.15	1.94	23.60	4.00	1.63	6.50	0.85	1.90	1.62
1989-90	11.55	1.76	20.34	4.95	2.17	10.75	0.98	1.61	1.58
1990-91	9.75	1.62	15.75	4.75	2.42	11.50	0.89	1.46	1.30
1991-92	9.70	1.99	19.30	4.80	2.32	11.15	0.90	1.44	1.30
1992-93	10.63	2.12	22.50	4.90	2.32	11.35	0.98	1.79	1.75
1993-94	11.44	2.16	24.70	5.40	2.30	12.40	1.05	1.71	1.80
1994-95	11.68	2.22	25.90	5.70	2.19	12.50	1.10	2.00	2.20
1995-96	10.95	2.21	24.15	5.98	2.08	12.43	1.10	2.18	2.40
1996-97	11.80	2.27	26.80	6.26	1.81	11.20	1.20	2.31	2.77
1997-98	13.00	2.50	32.50	6.95	2.80	19.50	1.20	2.49	2.99
1998-99	12.90	2.43	31.30	8.17	2.45	20.00	1.20	2.54	3.05
1999-00	13.60	2.51	34.20	8.58	2.47	21.20	1.15	2.52	2.90
2000-01	13.93	2.80	39.00	10.40	2.67	27.80	1.35	2.61	3.52
2001-02	16.35	2.66	43.50	11.40	2.63	30.00	1.45	2.45	3.55
2002-03	18.40	2.85	52.50	12.60	2.82	35.50	1.55	2.90	4.50
2003-04	21.30	2.47	52.60	14.00	2.43	34.00	1.75	2.29	4.00
2004-05	23.50	2.81	66.00	14.20	2.75	39.00	2.00	2.50	5.00

Source: USDA, FAS

Table 10. World Oilseed and Soybean Production

	Major Oilseeds			Soybeans		
Year	United States	Ex-United Stated	Total	United States	Ex-United States	Total
			million metric tons			
1977-78	56.5	93.7	150.2	47.95	23.98	71.93
1978-79	58.6	92.0	150.6	50.86	26.62	77.48
1979-80	72.4	98.1	170.5	61.72	31.79	93.51
1980-81	55.8	99.8	155.6	48.77	32.20	80.97
1981-82	64.0	105.5	169.5	54.13	31.93	86.06
1982-83	68.2	110.1	178.3	59.61	33.96	93.57
1983-84	50.4	115.1	165.5	44.52	38.64	84.16
1984-85	59.2	131.7	191.1	50.64	42.50	93.14
1985-86	65.4	130.8	196.2	57.13	39.92	97.05
1986-87	59.4	135.0	194.4	52.87	45.21	98.08
1987-88	60.6	150.0	210.6	52.75	51.06	103.81
1988-89	50.3	153.9	204.2	42.15	53.49	95.64
1989-90	59.3	153.1	212.4	52.35	55.02	107.37
1990-91	60.6	155.1	215.7	52.42	51.57	103.99
1991-92	64.3	160.0	224.3	54.07	53.31	107.38
1992-93	68.4	158.9	227.4	59.61	57.69	117.30
1993-94	59.5	168.4	227.9	50.92	66.58	117.50
1994-95	79.7	181.2	260.9	68.49	69.14	137.63
1995-96	69.1	190.6	259.7	59.24	65.72	124.96
1996-97	74.8	187.0	261.8	64.78	67.40	132.18
1997-98	83.1	203.9	287.0	73.18	84.90	158.07
1998-99	84.4	210.3	294.7	74.60	85.21	159.81
1999-00	82.3	221.1	303.4	72.22	87.68	159.90
2000-01	84.9	228.5	313.4	75.06	100.00	175.06
2001-02	89.8	235.3	325.1	78.67	106.20	184.87
2002-03	83.9	245.8	329.7	75.01	122.30	197.31
2003-04	75.6	260.3	335.9	65.80	123.32	189.12
2004-05	89.4	289.7	379.1	80.01	144.55	224.57

[1]WASDE July 2004 and earlier.